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U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## SODA ASH AND SODIUM SULFATE IN SEPTEMBER 1996

Natural soda ash production in September was 823,000 metric tons, 2% higher than the previous month's production, according to the U.S. Geological Survey. Ending inventories were 223,000 tons, a 16% decrease from that of the preceding month. Wyoming trona production in September was 1,350,000 tons. Total production of chemical caustic soda as soda ash equivalent, based on data from all three producers, was 22,000 tons in September.

Apparent consumption of soda ash for August was 457,000

tons, 18% lower than the August 1995 level of 557,000 tons. Exports and imports of soda ash in August were 392,000 tons and 8,310 tons, respectively.

The cumulative soda ash statistics through August 1996, compared with those of the corresponding period in 1995, were as follows: production 1% lower, imports 23% higher, exports 6% higher, ending stocks 40% higher, and apparent consumption 3% lower.

**This month's publication contains a list of Internet sites that pertain to the soda ash, sodium sulfate, and salt industries. This list is a supplement to the list that was published in the June publication.**

## **Soda Ash, Sodium Sulfate, and Salt Internet Addresses**

### U.S. Soda Ash Companies:

#### **<http://www.sound.net/~hcgwww/index.html>**

The Harris Chemical Group has an excellent web site that has separate links to its various products, including salt, soda ash, and sodium sulfate, with additional links to the companies that comprise the Harris Chemical Group.

#### **<http://www.sound.net/~hcgwww/nacc.htm>**

This is the site for North American Chemical Company that has a photo of its Searles Valley facilities and a discussion of its activities. North American Chemical is a member of the Harris Chemical Group. The operation produces soda ash, sodium sulfate, potash, and boric acid.

### Foreign Soda Ash Producers:

#### **<http://www.sound.net/~hcgwww/europe/mathes.html>**

Matthes & Weber is the synthetic soda ash facility in Germany that is owned by the Harris Chemical Group. This site has a photo and some text about the operation.

#### **<http://www.sumitomo-chem.co.jp/index.html>**

This site is for Sumitomo Chemical Co. of Japan, which is a soda ash joint venture partner with FMC Corp. in Wyoming. The home page contains information about the company's products and links to web sites of other chemical companies and chemical information locations.

#### **<http://www.infoindia.com/t&f/iw/ic00102.html>**

This site is for Tata Chemicals Ltd., the synthetic soda ash producer in India. The site has company financial data and information about the various products made and raw materials used.

### U.S. Salt Companies:

#### **<http://www.akzonobelsalt.com/minetour/minetour.htm>**

Akzo Nobel Salt Co. has a web page for its Cleveland rock salt mine where you can take an underground tour of its operation through a series of images with text. There are sections about salt facts and history as well as a salt quiz to test your knowledge about the commodity. A collection of free recipes is awarded for the successful completion of the quiz.

#### **<http://www.sound.net/~hcgwww/gslm.htm>**

As a member of the Harris Chemical Group, Great Salt Lake Minerals Co. produces solar salt for its affiliate, North American Salt Co., which markets the salt. The site contains photos and a description of the operation.

#### **<http://www.sound.net/~hcgwww/nasc.htm>**

This site contains information about the U.S. and Canadian salt operations of North American Salt Co., which is another company of the Harris Chemical Group.

#### **<http://www.cargill.com/>**

Cargill, Inc. is a major salt producer in the United States and Australia. This web site contains information about the company and its products.

#### Foreign Salt Companies and Operations:

**<http://www.personal.u-net.com/~morris/industry.htm>**

The Northwich, Cheshire, England, web site has a page devoted to the salt industry in Northwich. There is discussion about salt making by the Romans in the region and modern day salt mining.

**<http://www.infcom.it/kalat/zone/saline/salineuk.html>**

The site has some historical information about the salt pans along the coast of Italy between Trapani and Paceco that reportedly were constructed by the Phoenicians.

**<http://www.sound.net/~hcgwww.europe/saltunion.html>**

The Harris Chemical Group owns Salt Union Ltd., which produces vacuum pan salt and rock salt in England. This site has photos and some brief discussion of the operation.

**<http://www.umassd.edu/SpecialPrograms/caboverde/salhist.html>**

This site discusses the salt history of Ilha do Sal in the Cape Verde archipelago off the West African coast. Salt was obtained from the island by Arabs prior to its discovery by Portuguese navigators in 1460.

**<http://www.dampiersalt.com.au/>**

Dampier Salt Ltd. of Australia has put together one of the most comprehensive web sites on the internet. It contains information about salt facts, history, uses, properties, and solar salt production, which is a technical discussion of how solar salt is made. Numerous photos are available to see. The site also has links to other salt-related web sites in the world.

**<http://www.mineralswa.asn.au/info2/salt.html>**

This is an Australian tourism information site that discusses the salt industry of Western Australia. The page discusses how and where salt is produced in the region.

#### Salt Museums:

**<http://www.syracuse.ny.us/Activities/Features/salt.html>**

This is the web site for the Salt Museum in Liverpool, NY, where the Onondaga salt industry was located. The museum is built in an original salt boiling block where salt was made in the nineteenth century.

**<http://members.aol.com/saltmuseum/index.htm>**

The Deutsches Salzmuseum (German Salt Museum) has a home page in English that contains information about this museum dedicated to the history of salt in Europe. Various pages take you through a tour of what is contained in the museum. The site also has links to several salt museums and salt companies in the world.

**<http://www.jnet.ad.jp/WWW?JT/museum/>**

The Tobacco and Salt Museum is operated by Japan Tobacco, Inc., the organization that oversees salt production and trade in Japan.

**<http://www.liverpool.com/frodsham/places/salt.htm>**

This is the web site for the Cheshire County, England, salt museum. It provides information about the history, production, and uses of salt in Cheshire.

**[http://www.tcs.co.at/guide/d\\_activ/orte/bergwerk.htm](http://www.tcs.co.at/guide/d_activ/orte/bergwerk.htm)**

Although the text is in German, the site discusses the salt industry of Hallein and information about the salt museum.

**<http://zeus.polsl.gliwice.pl/agrest...winHwin/www.cyf-kr.edu.pl/wieliczka>**

The Wieliczka salt mine in Poland is the oldest operating salt mine in the world, dating back to Roman times. The mine hosts a salt museum. This site has several interesting photos.

Salt—Nutrition:

**<http://www.pinsight.com/~gssi/index.html>**

The Grain and Salt Society, Inc. has a web site about the use of Celtic seasalt produced in Brittany, France. The uses and benefits of seasalt are discussed. A photo gallery shows how solar salt is harvested in Brittany. Also, there is information about society membership and price lists on ordering Celtic salt.

TABLE 1  
SALIENT SODA ASH AND NATURAL SODIUM SULFATE STATISTICS 1/

Period	Soda ash (Thousand metric tons)		Natural sodium sulfate (Metric tons)	
	Production 2/	Ending stocks	Production	Ending stocks
1995:				
August	840	188	26,500	18,700
September	845	185	25,900	11,400
October	870	193	33,200	19,000
November	876	254	30,100	18,800
December	907	306	26,300	16,400
Total (Jan-Sep)	7,450	XX	238,000	XX
Total	10,100	XX	327,000	XX
1996:				
January	765	287	26,800	18,200
February	811	329	28,700	18,000
March	790	257	32,400	20,700
April	836	215	24,200	23,400
May	852	260	15,500	11,300
June	859	284	26,400	14,700
July	822	296	22,100	12,300
August	809	264	24,100	15,700
September	823	223	26,000	16,400
Total	7,370	XX	226,000	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Production data includes soda ash equivalent from soda liquors only. Soda ash equivalent from mine water is not included. Soda liquors for the current year 1996 are withheld to avoid disclosing company proprietary data.

TABLE 2  
U.S. EXPORTS OF SODA ASH AND SODIUM SULFATE 1/

(Metric tons)

Period	Disodium carbonate		Salt Cake		Disodium Sulfate		Total	
	Quantity (thousand metric tons)	Value 2/ (thousands)	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)	Quantity	Value 2/ (thousands)
1995:								
August	278	36,200	1,570	168	1,300	725	2,870	893
September	334	45,200	9,760	923	2,490	226	12,200	1,150
October	320	41,700	1,390	111	671	187	2,060	298
November	275	36,600	1,580	131	487	170	2,070	301
December	286	36,300	10,400	793	192	84	10,600	877
Total (Jan-Aug)	2,360	286,000	36,400	2,900	3,070	1,720	39,500	4,630
Total	3,570	445,000	59,500	4,860	6,910	2,390	66,400	7,250
1996: 3/								
January	300	38,700	4,060	317	108	43	4,160	360
February	314	42,100	14,000	1,040	212	88	14,200	1,130
March	270	35,900	2,000	172	2,350	576	4,340	748
April	349	45,300	8,260	646	31	16	8,290	662
May	217	29,000	104	17	63	38	167	55
June	337	43,800	13,300	1,290	43	17	13,400	1,310
July	315	42,000	12,500	695	29	20	12,600	715
August	392	51,100	2,440	189	6,620	956	9,060	1,150
Total	2,490	328,000	56,700	4,370	9,450	1,750	66,100	6,120

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Free alongside ship (f.a.s.) value at U.S. ports.

3/ September 1996 data not available at time of publication.

Source: Bureau of the Census, as adjusted by the U.S. Geological Survey, using Journal of Commerce trade data and information.

TABLE 3  
U.S. EXPORTS OF SODA ASH BY COUNTRY, 1996 1/

(Metric tons)

Country	January	February	March	April	May	June	July	August	Total Quantity	% of total
Argentina	13,000	--	8,950	--	--	--	22,200	--	44,200	2
Australia	--	--	5,000	--	--	--	5,000	25,100	35,100	1
Belgium	6,900	5,610	--	27,600	--	15,000	--	6,010	61,200	2
Bolivia	2,500	--	1,100	--	--	--	1,010	--	4,610	--
Brazil	34	42,300	17,800	7,050	--	--	5,040	28,000	100,000	4
Canada	16,700	21,300	23,900	14,100	17,300	20,200	26,900	21,700	162,000	7
Chile	21,900	--	19,100	--	17,200	--	24,600	--	82,800	3
China	13,000	--	8,000	4,970	4,500	--	4,500	--	35,000	1
Colombia	11,700	11,100	--	11,600	--	11,000	10,900	--	56,300	2
Costa Rica	--	--	--	1	--	--	--	--	1	--
Croatia	--	--	--	8,840	--	5,870	--	7,690	22,400	1
Dominican Republic	--	2,160	--	--	--	--	--	--	2,160	--
El Salvador	--	--	--	--	--	--	1,000	--	1,000	--
Germany	--	--	124	--	42	--	--	--	166	--
Ghana	--	--	--	--	--	--	16	--	16	--
Guatemala	--	5	3,500	--	--	--	3,300	(2/)	6,800	--
Honduras	--	--	--	--	--	--	200	--	200	--
Hong Kong	--	--	40	--	63	71	--	--	174	--
India	--	--	--	--	--	--	--	23,000	23,000	1
Indonesia	23,500	25,500	44,400	42,100	23,600	35,100	26,500	40,100	261,000	11
Ireland	383	--	--	--	392	--	583	583	1,940	--
Israel	--	--	8,000	--	--	--	--	7,910	15,900	1
Jamaica	2,000	29	--	--	--	--	1,990	--	4,020	--
Japan	7,900	36,400	--	39,600	11,600	46,400	27,700	26,400	196,000	8
Korea, Republic of	15,100	22,700	5,290	43,600	27,100	30,800	54,800	22,700	222,000	9
Malaysia	10,500	--	--	8,800	12,500	--	9,920	12,400	54,200	2
Mexico	33,200	39,300	34,600	32,700	26,800	34,100	28,100	30,900	260,000	10
Netherlands	--	--	2	--	--	101	--	--	103	--
New Zealand	40	20	40	7,070	--	20	4,020	7,000	18,200	1
Panama	--	--	--	--	2,000	--	--	--	2,000	--
Peru	4,020	--	4,140	--	6,230	--	--	--	14,400	1
Philippines	12,300	12,300	10,000	--	11,300	13,800	--	13,700	73,200	3
Saudi Arabia	18,000	--	--	17,500	3,790	22,000	22,000	22,000	105,000	4
Singapore	--	--	--	4,970	--	--	--	3,000	7,970	--
South Africa	--	24,500	27,100	25,000	--	25,100	--	--	102,000	4
Spain	11,400	--	--	--	16,000	9,300	--	5,960	42,700	2
Sweden	--	--	--	32	--	--	--	--	32	--
Taiwan	21,700	13,600	21,200	12,900	15,500	--	22,600	17,900	125,000	5
Thailand	23,000	28,000	25,000	8,300	21,500	20,500	12,300	22,800	161,000	6
Trinidad and Tobago	--	--	1,360	--	--	--	--	3,080	4,440	--
Turkey	--	--	--	7,310	--	--	--	7,000	14,300	1
United Arab Emirates	--	--	--	--	--	--	--	5,000	5,000	--
United Kingdom	--	1	--	--	--	--	1	--	2	--
Uruguay	--	--	1,000	--	--	--	--	--	1,000	--
Uzbekistan	--	--	7	--	--	--	--	--	7	--
Venezuela	30,800	29,200	--	24,500	--	47,900	--	32,400	165,000	7
Total	300,000	314,000	270,000	349,000	217,000	337,000	315,000	392,000	2,490,000	100

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 4  
U.S. IMPORTS OF SODA ASH AND SODIUM SULFATE 1/

(Metric tons)

Period	Disodium carbonate		Disodium Sulfate				Total	
	Value 3/		Saltcake 2/		Other		Value 3/	
	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)	Quantity	(thousands)
1995:								
August	6,640	938	9,920	1,030	4,740	300	14,700	1,330
September	6,770	968	10,500	911	6,750	462	17,200	1,370
October	8,040	1,150	12,400	1,130	5,310	365	17,700	1,490
November	6,240	899	11,000	1,150	5,140	338	16,100	1,490
December	6,480	891	12,400	1,180	3,620	289	16,000	1,470
Total (Jan-Aug)	55,200	8,080	87,400	8,120	51,800	3,790	139,000	11,900
Total	82,700	12,000	134,000	12,500	72,600	5,250	206,000	17,700
1996: 4/								
January	8,130	1,140	12,000	1,120	4,070	276	16,000	1,390
February	7,400	1,050	10,300	966	3,260	279	13,600	1,250
March	9,460	1,330	13,500	1,150	2,920	220	16,400	1,370
April	8,510	1,200	11,200	993	1,950	186	13,100	1,180
May	8,440	1,130	13,700	1,330	1,690	184	15,400	1,510
June	8,770	1,200	14,400	1,400	2,250	342	16,600	1,750
July	8,630	1,180	9,940	987	3,800	405	13,700	1,390
August	8,310	1,140	11,700	1,110	2,940	270	14,600	1,380
Total	67,700	9,370	96,600	9,050	22,900	2,160	119,000	11,200

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes Glauber's salt.

3/ Customs, insurance, and freight (c.i.f) value at U.S. ports.

4/ September 1996 data not available at time of publication.

Source: Bureau of the Census.

TABLE 5  
U. S. APPARENT CONSUMPTION OF SODA ASH 1/

(Metric tons)

Period	Production	Imports	Exports	Net stock		Apparent consumption 2/
				Increase	or Decrease	
1995:						
August	840,000	6,640	278,000	12,000	--	557,000
September	845,000	6,770	334,000	--	3,000	521,000
October	870,000	8,040	320,000	8,000	--	550,000
November	876,000	6,240	275,000	61,000	--	546,000
December	907,000	6,480	286,000	52,000	--	575,000
Total (Jan-Aug)	6,600,000	55,200	2,360,000	--	15,000	4,310,000
Total	10,100,000	82,700	3,570,000	103,000	--	6,510,000
1996:						
January	765,000	8,130	300,000	--	19,000	493,000
February	811,000	7,400	314,000	42,000	--	462,000
March	790,000	9,460	270,000	--	72,000	602,000
April	836,000	8,510	349,000	--	42,000	538,000
May	852,000	8,440	217,000	45,000	--	598,000
June	859,000	8,770	337,000	24,000	--	506,000
July	822,000	8,630	315,000	12,000	--	503,000
August	809,000	8,310	392,000	--	32,000	457,000
September	823,000	NA	NA	--	41,000	NA
Total (Jan-Aug)	6,540,000	67,700	2,490,000	--	42,000	4,160,000

NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Production plus imports minus exports plus or minus stock changes.